

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 85, line 17 with the following new paragraph:

— **Synthesis of CT105.** To a flask containing M42 (0.64 g) and CT101 (1.0 g) in THF (10 mL) and methanol (10 mL) was added NaOH solution (1.0 mL, 8 M). The mixture was stirred in the air for six hours. Then the solvents were removed on a rotavapor at 40 °C and residue was dissolved in 150 mL of dichloromethane. The mixture was extracted with water (2x50 mL) and the organic layer dried over anhydrous sodium sulfate, filtered and concentrated. The residue was purified with silica gel chromatography eluted with 50% -90% ethyl acetate in hexane to provide the desired product as colorless viscous oil. ¹H NMR (300 MHz, CDCl₃) δ 3.80 – 3.62 (m, 12H, 6 x OCH₂), 3.47 (m, 4H, 2 x CH₂OH), 2.85 (s, 2H, SCH₂CMe₂), 2.74 (t, J = 7.2 Hz, 2H, SCH₂), 1.77 – 1.63 (m, 4H, 2 x CH₂), 1.32 (m, 16H), 1.02 (s, 6H, CMe₂). Anal. calcd. for (C₂₂H₄₆O₅S₂ + Na)⁺ : 477. Found: 477.

Electrochemical Evaluation of New Insulators

28: The following oligonucleotides were used to evaluate the new insulators:

1) Capture oligonucleotides:

D1650: 5'-TCA TTG ATG GTC TCT TTT AAC A(N152) (SEQ ID NO:1)

D1678: 5'-GAC TGA CTC GTA CTA(N152) (SEQ ID NO:2)

2) Direct assay signaling probe:

D1085: 5'-TCT ACA G(N6) C(N6) TGT TAA AAG AGA CCA TCA ATG A (SEQ ID NO:3)

3) Sandwich Assay target and signaling probes:

D765: 5'-GAC ATC AAG CAG CCA TGC AAA TGT TAA AAG AGA CCA TCA ATG AGG AAG CTG CAG AAT GGG ATA GAG TGC ATC CAG T (SEQ ID NO:4)

D772: 5'-(N6) C(N6) G(N6) C(N6) GCT TA(N6) C(N6) G(N6) C(N6) G(C131) TTT GCA TGG CTG CTT GAT GTC (SEQ ID NO:5)

D1156: 5'-CAC AGT GGG GGG ACA TCA AGC AGC CAT GCA AAT GTT AAA AGA GAC CAT CAA TGA GGA AGC TGC AGA ATG GGA TAG AGT CAT CCA GT (SEQ ID NO:6)

D1355 (20 Fc), D1356 (30 Fc) and D1357 (36 Fc) have the similar sequence as D1358 (54 Fc):

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D 1358: 5'-(C23)(C23)(C23)(C23)(C23)(C23)(N87)(N87)(N87)(N87) ATC
(C140)(N87)(N87)(N87)(N87)(C140) TTT GCA TGG CTG CTT GAT GTC CCC CCA
CTG TG (SEQ ID NO:7)

D998: 5'- TGT GCA GTT GAC GTG GAT TGT TAA AAG AGA CCA TCA
ATG AGG AAG CTG CAG AAT GGG ATA GAG TCA TCC AGT (SEQ ID NO:8)

D1055 (20Fc): 5'-(C23)(C23)(C23)(C23)(N87)(N87)(N87)(N87)(C140) ATC
CAC GTC AAC TGC ACA (SEQ ID NO:9) —

**Please insert the enclosed 3-page text entitled “SEQUENCE LISTING” immediately
preceding the claims.**